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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,191	01/09/2001	Mitsuo Inoue	201841US2	5684

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SOLOMON, GARY L

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 04/09/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,191

Applicant(s)

INOUE ET AL.

Examiner

Gary L Solomon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4,5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4 and 5 are objected to because of the following informalities:
3. "Liner Expansion Coefficient" should be spelled "Linear Expansion Coefficient" as it appears in the Applicant's Specification.
4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Igarashi (US 6,632,172).
7. For claim 1, Igarashi discloses an imaging apparatus including at least an imaging device having a plurality of photoelectric transfer devices arranged in a matrix shape to detect a light

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irradiated to each photoelectric transfer device and transfer to electric signal (Figure 1; Abstract), and

imaging means for imaging an image of a photogenic object (Figure 1, Element d) on a surface of the imaging devices,

wherein the imaging means images at least two similar images (Figure 1) of the photogenic subject on different areas of the surface of the imaging device (Figure 1, Element 8),

and the imaging apparatus further includes electric signal processing means to form one image (Column 4, Lines 48-53) of the photogenic subject from at least two images (Column 3, Lines 29-30) of the photogenic subject.

The stereoscopic endoscope of Igarashi takes images from the right and left portions. These are the two similar images. They both are of the photogenic subject. The left and right portions of the image are then projected onto different areas of the CCD, and thus, they form the image.

8. For claim 2, Igarashi discloses all the limitations of claim 1, and also wherein the imaging means is composed of a plurality of lens systems (Figure 1) having the same shape or refractive index (Column 6, Lines 50-65; n_1 , n_2 , n_3 are 1.8830; Column 9, Line 43) and arranged in a plane parallel to an light receiving surface of the imaging device (Figure 1).

9. For claim 3, Igarashi discloses all the limitations of claims 1 and 2, and also wherein the image formation lenses composing each lens system are formed integrally (Figure 1).

Examiner reads "integrally formed" each system of lens formed as of one unit. In Figure 1, each system of lenses is formed together as one unit. Such is the case in Elements 1 (positive lenses) and 2 (negative lenses) in Figure 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 6,632,172) in view of Nelson (US 5,237,340) in further view of Booth (5,738,427).

12. For claims 4 and 5, Igarashi discloses all the previous limitations in claims 1, and 2, but fails to disclose teaching of linear expansion coefficients in regards to the formation of the lens.

However, it is notoriously well known in the art that a high linear expansion coefficient in a lens will cause deformation of the lens, resulting in an unclear image.

Pyrex lenses have a low linear expansion coefficient and thus can solve this problem as Nelson and Booth teach in the following:

Nelson teaches an integrally formed lens portion made of pyrex glass (Column 5, Lines 60-69). Booth further teaches that pyrex glass has a low linear expansion coefficient of not more than 1×10^{-5} C (Column 5, Lines 55-63).

The use of a low coefficient of linear expansion will allow for the rigid mounting of a lens and also the high change in temperature will not cause deformation of the lens and thus cause it to be out of focus.

By integrally forming the pyrex lens of Nelson to the cover glass (Element 9, Igarashi), the image formation lenses composing the lens system would be formed of a material having a linear expansion of not more than 1×10^{-5} C. The cover glass is also a substrate material.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to configure the Pyrex lens of Nelson in the apparatus of Igarashi in order to be able to rigidly mount the lens and not have deformation of the lens resulting in an out of focus unclear image.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L Solomon whose telephone number is (703)-305-4370.

The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Vu Le can be reached on (703)-308-6613.

Any response to this action should be mailed to:


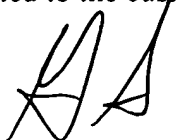
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for informal or draft communications, please label
"Proposed" or "Draft")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the customer service number (703) 306-0377.



VU LE
PRIMARY EXAMINER